

1. A method for detecting microorganisms comprising:  
placing a sample to be tested in a medium, the medium  
containing antibodies specific for binding to a microorganism to  
form an antigen to antibody complex;  
contacting the medium with a beam of light energy, some of the  
energy emitted from the medium as a lower resonance enhanced Raman  
backscattered energy; and  
detecting the presence or absence of the microorganism based  
on a characteristic spectral peak of said microorganism.

A B 2. The method of claim 1 wherein the medium is a fluid  
medium and the microorganism is a bacterium.

3. The method of claim 2 wherein the light energy is  
ultraviolet light.

4. The method of claim 3 wherein the ultraviolet light is in  
the range of 242 to 257 nm.

5. The method of claims 3 or 4 wherein the medium is a  
liquid medium further comprising:

removing the antigen antibody complex from the liquid medium;

and

detecting subsequently the presence or absence of the  
microorganism.

6. A system for detecting the presence or absence of a microorganism comprising:

contacting a medium containing antibodies specific for binding to a microorganism with a beam of light energy; and means for detecting the presence or absence of the microorganism in the presence of an excess of antibodies.

Add  
A<sup>1</sup>

add  
B<sup>2</sup>

add E

add  
G\*

add  
B<sup>1</sup>